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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/635,340

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Shigeyuki Nagata

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7590

07/27/2006

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EXAMINER

CAPUTO, LISA M

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/635,340	Applicant(s) NAGATA ET AL.	
	Examiner Lisa M. Caputo	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,23-27 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,23-27 and 29-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 May 2006 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 21, 23-27, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. (U.S. Patent No. 4,803,349, from hereinafter "Sugimoto") in view of Glaberson (U.S. Patent No. 4,886,957) and Imai et al. (U.S. Patent No. 6,446,872, from hereinafter "Imai").

Sugimoto teaches a card read/write device. Regarding claim 21, Sugimoto discloses a magnetic card transaction apparatus (main body of the card read/write device 1) that comprises a card slot from which a magnetic card is inserted (card insertion inlet 2), a card transferring mechanism that takes in the magnetic card inserted from the card slot (card transportation mechanism 6 comprising a pair of upper and lower endless belts and a motor Mo for driving transportation belts 61 and 62), and a detector disposed between the card slot and the card transferring mechanism (transportation mechanism driving sensor 5) and a control circuit that detects a first condition wherein the magnetic card is inserted from the card slot, the control circuit further operable to detect, after the first condition is detected, a second condition wherein the output of the detector is reduced to substantially zero or is lowered which is indicative of the slowing down of the magnetic card, and wherein after the control circuit detects the second condition, the card transferring mechanism is driven to take in the magnetic card (see Figure 1, col 2, lines 1-51). Regarding claims 27 and 29, Sugimoto further teaches a drive control circuit that drives the card transferring mechanism to transfer the magnetic card from the guiding path to an inside of the magnetic card transaction apparatus after the drive control circuit detects through an output of the detector that the magnetic card arrives at the card transferring mechanism

(transportation mechanism driving sensor 5 and circuitry therefore) and that the magnetic card is stopped at the card transferring mechanism or by a shutter (see Figures 1-3, col 2, lines 1-51).

Regarding claims 21, 23, 27, 29, and 34 although Sugimoto does not specifically state that a control circuit/drive control circuit reside within the card reader, a control circuit that is able to control the detector/sensor is necessary for the system to work properly.

Glaberson teaches a card reader for reading data strips carried on cards, the reader having a housing with an input slot carrying a removable card alignment tray to receive the cards. A sensor is used to detect the presence of an inserted card and cause the card, once sensed, to be drawn in by card driving mechanisms and forced into, and held, in alignment. Alignment is three dimensional in that the card is held against two perpendicular guides and flat against a window. A detector senses when the card is in its aligned position and actuates an optical scanner to scan the data strip on the card. Scanning is through the window, assuring that the plane of the card is correct. When scanning is completed, the input mechanism is reversed to eject the card. The system in addition comprises a control circuit, actuated by said sensor, to start operation of said scanner (see Figure 2, abstract and claims, col 4, lines 19-40). Hence, Glaberson teaches that it is well known in the art to have a control circuit coupled to a detector/sensor.

In view of the teaching of Glaberson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a control circuit in

order for the system to operate properly because the control circuit ensures proper operation of the mechanisms together in the reader.

Regarding claims 21, 23, 27, 29, and 34, although Sugimoto does indeed teach a device 7 for writing and reading information onto and off of a card, that is, a magnetic head for writing and reading information onto and off of a card (see Figure 1, col 2, lines 1-51), Sugimoto fails to teach that the magnetic head is disposed between the card slot and the card transferring mechanism and that the magnetic head can detect first and second conditions of the card.

Imai teaches a card reader having a space for discharging foreign matter. Imai discloses that FIGS. 1 through 3 illustrate an embodiment of a card reader of the present invention. A card reader 1 comprises a card transporting means 3 for transporting a card C inserted from a card inlet 5, a card passage 6 extending from the card inlet 5 in the direction of card insertion illustrated by an arrow a, another card passage 4, a shutter 9 free to open and close (to move) with respect to the card passage 4, and a magnetic head 10 for processing (recording/reproducing) magnetic data on the card C. The card C is transported in the card passage 4 by the card transporting means 3 driven by a driving motor 2. A card entering passage 6 is formed by extending the distance L longer than usual. The distance L is from the front surface of the card inlet 5, from which the card C is inserted, to the front edge of the card transporting means 3, that is, to the edge of a first transporting roller pair 13 on the card inlet side.

Further, after the conventional card inlet 50 in the card insertion direction, a, and before the shutter 9, a detecting means is provided for detecting whether the inserted

card is legal and moving the shutter 9 to an open position when the card is legal. In this embodiment, the detecting means consists of a pre-head 11 which contacts the magnetic stripe on the card C for detecting that the inserted substance has the magnetic signals. However, the detecting means may be a mechanical switch or optical switch for detecting the card width. The pre-head 11 is made of a magnetic head so that it detects whether the inserted card is legal or not by detecting the presence of the magnetic signals (i.e. first condition when a magnetic card is inserted). The output from the pre-head 11 is a portion of the trigger signals for driving the drive motor 2 and controlling the open-close movement of the shutter 9. After the pre-head 11 detects the legality of the card, the shutter 9 moves to the open position to be ready to take the card inside the card reader, and also drives the motor 2 to take the card inside with the transporting rollers. Above the card passage 4 and opposite the pre-head 11, a rotatable pad roller 12 is arranged and the card makes it to the actual magnetic head 10 (i.e. second condition) (see Figures 1-3, col 2, lines 1-15, col 3, lines 49-67, col 4, lines 48-60). Hence, Imai teaches that the magnetic head detector 10 is disposed between the card inlet 5 (with card passage 6) and the card transferring mechanism (card transporting means 3 to card passage 4) and can detect first and second conditions and magnetic signals.

In view of the teaching of Imai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the magnetic head as one of the detectors (i.e. in addition to the sensor) between the card slot and the card transferring mechanism so that it can be discerned earlier if the card is magnetic, and hence, if the

card should be accepted by the system which will increase system productivity (i.e. if the card is discerned before it's actually taken into the system as a usable card, then more time and effort is saved). In addition, Imai works with Sugimoto in order to clearly output the first and second conditions via the pre-head 11 and magnetic head 10 to the control circuit.

Further, regarding claims 23-24, Sugimoto in addition teaches an inlet sensor 3 and a shutter which opens or closes a card guiding path guiding the magnetic card inserted from the card slot to the card transferring mechanism (shutter 4, which is actuated by a solenoid SOL (the shutter controller of the instant application) to open or close the inlet passage). The shutter controller is coupled to an output of the detector and is operable to open the card guiding path by driving the shutter after the shutter controller detects through the detector output that the movement of the magnetic card is restricted by the shutter (see Figure 1, col 2, lines 25-45).

Regarding claims 30-33, when the user inserts his or her card A into card insertion inlet 2, the inlet sensor 3 is actuated (S1) so that a protective time T (not shown) is actuated (S2). After about one or two seconds, the solenoid SOL is energized (S3) so that the shutter is forced to move upwardly, whereby the card passage is opened (as recited in claims 25-26 of the instant application). When the user pushes the card A again, the leading end of the card A actuates the driving sensor 5 (S4) so that the motor MO is rotated in one direction, whereby the card A is transported to the right direction in Figure 1. When the card A passes the driving sensor 5, the latter is turned off (S6) and the solenoid SOL is de-energized (S7) so that

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the shutter is closed. The motor Mo is kept rotating in one direction so that the card A is transported in the right direction. During the transportation of the card A, the information stored on the card is read out (detected by magnetic head 7) (S111) and when the END mark is detected (S102), the motor MO is de-energized (S103) and whether or not an amount of money sufficient for sales of goods or service is read out from the card A is detected (S104). This step, where the motor is de-energized, causes a temporary suspension of the insertion of the magnetic card. If the amount of money is not sufficient, the solenoid SOL is energized to open the shutter and to cause the motor Mo to move in the other direction (S10), whereby the card A is transported backwardly to the insertion inlet. When the driving sensor 5 is turned on (S11) and then turned off (S12), the motor Mo is de-energized so that the transportation of the card A is interrupted (S13) and the solenoid SOL is de-energized (S14) to close the shutter. In this case, the shutter is placed upon the end portion of the card A so that when the card A is pulled out, the sensor 3 is turned off (S15) and consequently the device is returned to its standby state. When the motor moves in the other direction, the card moves in the reverse direction temporarily (see Figures 1-3, col 2, lines 13-51).

Response to Arguments

4. Applicant's arguments with respect to claims 21, 23-27, and 29-34 have been considered but are moot in view of the new ground(s) of rejection.
5. Examiner appreciates applicant's arguments that Sugimoto does not specifically teach a magnetic head disposed between the card slot and the card transferring mechanism and has provided new prior art in the form of Imai to teach this limitation.

6. In response to applicant's arguments that Sugimoto does not teach or suggest that a second condition is detected wherein the output of the detector is reduced to substantially zero or is lowered which is indicative of the slowing down of the magnetic card (as recited in claims 21, 27, 29, and 34), examiner respectfully disagrees and submits that, as claimed, Sugimoto as modified by Glaberson and Imai does indeed meet the limitations because the claim limitation recites that "the output of the detector is reduced to substantially zero or is lowered which is indicative of slowing down of the magnetic card," and it is interpreted that substantially zero is the un-actuated state of the detector. Sugimoto as modified by Glaberson and Imai does indeed teach sensors which detect an actuated or un-actuated state, hence the output had to have decreased from the actuated state to the un-actuated state when determining the presence of the card, and in addition, the card must have slowed down if the sensor is in an un-actuated state and the card has since stopped. More specifically, Imai teaches a pre-head sensor 11 and a magnetic sensor 10 which detects the conditions and helps to provide input to the control circuit. See 35 U.S.C. 103 rejections above.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lisa M. Caputo** whose telephone number is **(571) 272-2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-2398**. The fax phone number for this Group is (571) 273-8300.

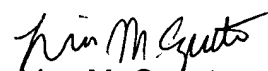
Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**lisa.caputo@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record

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includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lisa M. Caputo
AU 2876
July 22, 2006